

understood that each block of the flowchart, and combinations of blocks in the flowchart, may be implemented by various means, such as hardware, firmware, processor, circuitry, and/or other communication devices associated with execution of software including one or more computer program instructions. For example, one or more of the procedures described above may be embodied by computer program instructions. In this regard, the computer program instructions which embody the procedures described above may be stored by a memory device **24** of an apparatus employing an embodiment of the present invention and executed by a processor **22** of the apparatus. As will be appreciated, any such computer program instructions may be loaded onto a computer or other programmable apparatus (e.g., hardware) to produce a machine, such that the resulting computer or other programmable apparatus implements the functions specified in the flowchart blocks. These computer program instructions may also be stored in a computer-readable memory that may direct a computer or other programmable apparatus to function in a particular manner, such that the instructions stored in the computer-readable memory produce an article of manufacture the execution of which implements the function specified in the flowchart blocks. The computer program instructions may also be loaded onto a computer or other programmable apparatus to cause a series of operations to be performed on the computer or other programmable apparatus to produce a computer-implemented process such that the instructions which execute on the computer or other programmable apparatus provide operations for implementing the functions specified in the flowchart blocks.

[0068] Accordingly, blocks of the flowchart support combinations of means for performing the specified functions and combinations of operations for performing the specified functions for performing the specified functions. It will also be understood that one or more blocks of the flowchart, and combinations of blocks in the flowchart, can be implemented by special purpose hardware-based computer systems which perform the specified functions, or combinations of special purpose hardware and computer instructions.

[0069] In some embodiments, certain ones of the operations above may be modified or further amplified. Furthermore, in some embodiments, additional optional operations may be included. Modifications, additions, or amplifications to the operations above may be performed in any order and in any combination.

[0070] Many modifications and other embodiments of the inventions set forth herein will come to mind to one skilled in the art to which these inventions pertain having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the inventions are not to be limited to the specific embodiments disclosed and that modifications and other embodiments are intended to be included within the scope of the appended claims. Moreover, although the foregoing descriptions and the associated drawings describe example embodiments in the context of certain example combinations of elements and/or functions, it should be appreciated that different combinations of elements and/or functions may be provided by alternative embodiments without departing from the scope of the appended claims. In this regard, for example, different combinations of elements and/or functions than those explicitly described above are also contemplated as may be set forth in some of the appended claims. Although specific terms are

employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.

That which is claimed:

1. A method comprising:

receiving an image comprising a display from a first location;
determining, with a processor, a dimension of the display within the image;
determining an angle of the display based upon the dimension of the display determined within the image and the first location; and
permitting an audio playback system associated with the display to be calibrated based upon the determined angle.

2. A method according to claim **1** wherein permitting the audio playback system to be calibrated comprises causing the angle to be provided to a remote audio processor of the audio playback system to calibrate audio.

3. A method according to claim **1** wherein permitting the audio playback system to be calibrated comprises determining a measure of calibration and causing the measure of calibration to be provided to a remote audio processor of the audio playback system.

4. A method according to claim **3** wherein determining a measure of calibration comprises determining a modified azimuth of an auditory object based upon the angle of the display.

5. A method according to claim **4** wherein determining the modified azimuth comprises determining the modified azimuth only for one or more auditory objects that contain speech.

6. A method according to claim **3** wherein determining a measure of calibration comprises converting left and right channels of multichannel audio into mid and side channels, modifying the mid and side channels based upon a target audio image width and converting the mid and side channels, as modified, to left and right channels of multichannel audio.

7. A method according to claim **1** wherein receiving the image comprises causing the image to be captured by a camera of a mobile device at the first location from which the display will be viewed.

8. A method according to claim **1** further comprising determining information regarding keystone from the image comprising the display and causing the information regarding keystone to be provided so as to permit modification of the video presented upon the display to reduce the keystone.

9. A method according to claim **1** further comprising determining a center of the display based upon the image comprising the display.

10. An apparatus comprising:

at least one processor; and

at least one memory communicatively coupled to the at least one processor, wherein the at least one memory includes computer program code for facilitating calibration of an audio playback system, the computer program code, when executed by the at least one processor, configured to cause the apparatus to at least:

receive an image comprising a display from a first location;
determine a dimension of the display within the image;
determine an angle of the display based upon the dimension of the display determined within the image and the first location; and
permit the audio playback system associated with the display to be calibrated based upon the determined angle.